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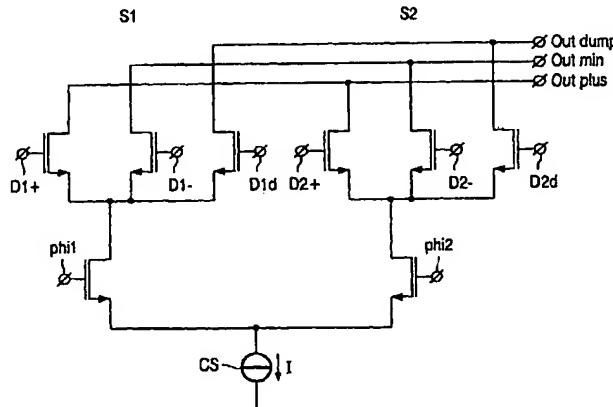
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(54) Title: DIGITAL TO ANALOG CONVERSION



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(57) Abstract: A unit cell for a digital to analog conversion circuit comprising; a current source (CS); a first data switch (S1) coupled to the current source (CS); a second data switch (S2) coupled to the current source (CS); a first phase switch (Phi1) coupled between the current source (CS) and the first data switch (S1); a second phase switch (Phi2) coupled between the current source (CS) and the second data switch (S2); a controller arranged to switch between the first (Phi1) and second (Phi2) phase switches in a Break Before Make alternating sequence, and to switch the first (S1) and second (S2) data switches in a Make Before Break sequence. A digital to analog convector circuit constructed using unit cells according to the invention is more area and power efficient than the previously known circuit because it uses only one current source, yet it succeeds in preventing short-circuit error currents between the outputs and solves the problems caused by pulse asymmetry and the influence of switch-charge injection, and provides more linear and better quality output signals.

## INTERNATIONAL SEARCH REPORT

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IPC 7 H03M1/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 059 977 A (HERMAN RAY M ET AL) 22 October 1991 (1991-10-22) column 8, line 25 -column 10, line 32 -----	1-6
A	US 4 908 620 A (FUJISAWA AKIHIKO) 13 March 1990 (1990-03-13) column 4, line 62 -column 9, line 6 -----	1-6
A	PATENT ABSTRACTS OF JAPAN Vol. 1998, no. 11, 30 September 1998 (1998-09-30) -& JP 10 171415 A (MATSUSHITA ELECTRIC IND CO LTD), 26 June 1998 (1998-06-26) abstract -----	1-6

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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